

On page 7, line 4, delete "above-described method" and change "a block" to --the block--.

On page 7, line 24, delete "(known)".

On page 8, line 16, change "the most common case," to --a block diagram of a circuit

arrangement according to an embodiment of the present invention--.

On page 8, line 30, change "To further improve the method, it is possible to use" to

--In other embodiments of the present invention--.

On page 9, line 1, change "constellations and" to --may be used.--.

On page 9, line 2, change "which can be found in the articles" to --Such special

coding methods may be found, for example, in--.

On page 9, line 8, after "740-744" insert --, both of which are hereby incorporated by

reference herein--.

On page 10, delete all lines.

On page 11, line 1, change "Patent Claims" to --WHAT IS CLAIMED IS:--.

IN THE CLAIMS

Please cancel without prejudice claims 1-15 and add new claim 16-32 as follows:

--16. (new) A method for data transmission comprising:

using a multi-level modulation process to represent a signal for transmission, the multi-level modulation process using at least one orthogonal basis function; and

selecting signal points of a signal constellation according to at least one respective predetermined and/or selected probability so as to optimize a respective signal energy and/or a respective signal data rate, the selected signal points each having a respective defined energy.

17. (new) The method as recited in claim 16 further comprising using at least one source coding process for adapting a data sequence of the signal for the using of the at least one orthogonal basis function.

18. (new) The method as recited in claim 17 wherein the at least one source coding process includes a Huffman method.

19. (new) The method as recited in claim 16 further comprising using a first data source to provide the signal for transmission and using at least one source coding process for adapting a data sequence of the signal for the using of the at least one orthogonal basis function, the at least one source coding process including an error-correcting code adapted to the modulation process and a respective transmission channel for protection against transmission errors, error detection characters of the modulation process being inserted using a second data source.

20. (new) The method as recited in claim 19 wherein the error-correcting code includes a block code.

21. (new) The method as recited in claim 19 wherein the error-correcting code includes a convolution code.

22. (new) The method as recited in claim 20 wherein the block code includes a code over Gaussian integers modulo a Gaussian number.

23. (new) The method as recited in claim 20 wherein the block code includes a code over Eisenstein-Jacobi integers modulo an Eisenstein-Jacobi number.

24. (new) The method as recited in claim 16 wherein that the signal for transmission includes an encrypted input data stream.

25. (new) A method as recited in claim 16 further comprising selecting a first data rate for the transmission channel that is greater than a second data rate of the data stream.

26. (new) The method as recited in claim 16 further comprising transmitting synchronization data during at least one time when no bits are present in the signal for

transmission.

27. (new) The method as recited in claim 16 further comprising transmitting at least one of housekeeping data and user data when no bits are present in the signal for transmission.

28. (new) A circuit arrangement for data transmission using a multi-level modulation process, the multi-level modulation process using at least one orthogonal function, the circuit arrangement comprising:

- a data source for providing a data stream;
- a recoder downstream of the data source;
- a modulator for selecting signal points of a signal constellation according to at least one respective predetermined and/or selected probability so as to optimize a respective signal energy and/or a respective signal data rate, the selected signal points each having a defined respective energy, the modulator being connected to an output of the recoder;
- a transmission channel, an input of the transmission channel being connected to an output of the modulator;
- a demodulator, an input of the demodulator being connected to an output of the transmission channel;
- an inverse recoder for executing a first operation inverse to a second operation of the recoder, an input of the inverse recoder being connected to the demodulator; and
- a data sink, an input of the sink being connected to an output of the inverse recoder.

29. (new) The circuit arrangement as recited in claim 28 further comprising:

- a temporary storage device including a control/processing unit, the temporary storage device being capable of triggering the recoder to switch between at least two recoding tables so that there is no storage overflow;
- a second temporary storage device including a second control/processing unit disposed between the inverse recoder and the sink; and
- a second data sink connected to the second temporary storage device.

30. (new) The circuit arrangement as recited in claim 28 wherein the output of the